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MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C.
9255 TOWNE CENTER DRIVE
SUITE 600
SAN DIEGO, CA 92121

EXAMINER	
LIU, LIN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/677,112	HOFMANN ET AL.	
	Examiner	Art Unit	
	Lin Liu	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to communications filed on 09/21/2007.

Claims 1-26 are pending and have been examined.

Claim Objections

2. Claim 26 is objected to because of the following informalities:

A spelling typo for "receiver" is found in instant claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended the independent claim to include the additional limitation: "the request message ... being at a communication layer higher than an Open Systems Interconnection Basic Reference Model lager 3", which is not presently supported by the specification, and applicant has not pointed out where in the specification support can be found for such limitation.

5. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The instant claim recites the limitation: "the asynchronous request message... store duplicates of the asynchronous request message...", it is indefinite and vague to the examiner as to how a message can store duplicates of the message itself. The specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 12-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended the claims 12 and 19 to include the new limitation: "the asynchronous request message for enterprise application-level processing of the asynchronous request message at a receiver system", which is narrative and indefinite, failing to conform the current U.S. practice.

They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

9. Claim 26 recites the limitation "the message". There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, examiner treats this term as "the asynchronous request message".

10. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claim recites the phrase: "... and an application of the sender system *that causes the call the outbound proxy continues processing information* other than the asynchronous request message without an acknowledgment from the receiver system or status of the call." It is vague and indefinite as what applicant refers to by the phrase: "*that causes the call the outbound proxy continues processing information*". There appears to be grammatical and idiomatic errors in this phrase.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1, 4-14 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ho et al. (publication no.: US 2003/0135640 A1)** in view of **Wilhelmsson (Patent no.: US 5,654,969), Wookey et al (PGPUB: US 2003/0177259 A1)** and as evidenced by **Microsoft TechNet (Windows 2000 Resource kit).**

With respect to **claim 1,** Ho teaches a computer-implemented communication method, comprising:

providing one or more requests for acknowledgement in data frames transmitted from a sender system (Ho, fig. 5, page 4, paragraph 33, noted the acknowledgement request frame 104 is transmitted from transmitting station to the receiving station), wherein each request for acknowledgement corresponds to at least one event related to the data frame (Ho, page 4, paragraph 35, noted that the acknowledgement frame indicates whether or not the associated data frame was correctly received); and

transmitting the data frames with the one or more requests for acknowledgement to a receiver system (Ho, page 4, paragraph 33, note that the transmitting station transmits data frames with an acknowledgement request frame to the receiving station), the receiver system being an enterprise system providing services, the request to

request one or more of the services of the receiver system to process the asynchronous request message (Ho: fig. 4-5, page 4, paragraphs 33-35, noted that upon receiving the data frames at the receiving station, the receiving station services the transmitting station by sending the group acknowledgement frame back to the transmitting station), and the transmitting the request message comprising transmitting the request message in an exchange infrastructure for communication among components of collaborative business systems, the components comprising the sender system and the receiving system (Ho: fig. 1 & 5, page 4, paragraph 33, noted the transmitting station 120 and the receiving station 122).

However, Ho does not explicitly teach dividing an asynchronous request message into number of data frames and transmit them from a sender to a receiver system, and the asynchronous request message being in a format in accordance with extensible markup language format and being at a communication layer higher than an Open Systems Interconnection Basic Reference Model layer 3.

In the same field of endeavor, Wilhelmsson teaches dividing an asynchronous request message into number of data frames and transmit them from a sender to a receiver system (Wilhelmsson, col. 7, lines 63-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of dividing the asynchronous request message into number of data frames and transmitting them from a sender to a receiver system as taught by Wilhelmsson in Ho's invention in order to minimize the load on the transmission channels.

However, the combined method of Ho and Wilhelmsson does not explicitly disclose that the asynchronous request message being in a format in accordance with extensible markup language format and being at a communication layer higher than an Open Systems Interconnection Basic Reference Model layer 3.

In the same field of endeavor, Wookey teaches a method of generating and sending a request message in a format in accordance with extensible markup language format (Wookey: fig. 19-20, page 17, paragraphs 208 & 216, noted that the sender (remote services proxy) makes a XML request message to the receiver system (Applications MLM)) and being at a communication layer higher than an Open Systems Interconnection Basic Reference Model layer 3 (Wookey: fig. 19-20, pages 17-18, paragraphs 216-218, noted that the XML request message is made in the Application level of OSI system).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of generating and sending a XML request message from the sender to the receiver system as taught by Wookey in the modified combined method of Ho's and Wilhelmsson's method. The motivation to combine the Wookey's method is that because XML request message format is International standard and platform independent, thus it can be moved freely between all hardware and OS platforms. As the consequence of combining the Wookey's invention with the combined method of Ho's and Wilhelmsson's method, that the XML request message is generated and processed from the Application layer, which is higher than the OSI model layer 3, thus the XML request message data needs to be

processed from the Application layer down to the Physical Layer so that the actual data communication between the sender and receiver systems can be taken place in the Physical Layer as disclosed in the combined method of Ho's and Wilhelmsson's invention. This process of data flow can be evidenced by the "Data Flow in the OSI Model" disclosed by MicrosoftTechNet. Therefore, the Physical layer communication in the combined method of Ho's and Wilhelmsson's invention can be easily combined with any higher layer data processing (i.e Wookey).

With respect to **claim 4,** Ho teaches the method in accordance with claim 1, wherein the event includes a system error during transport of the request message to the receiver system (Ho, page 4, paragraph 35, noted that the acknowledgement frame has a value in indicating if the data frame was received correctly).

With respect to **claim 5,** Ho teaches the method in accordance with claim 1, wherein the event includes the receipt of the request message by the receiver system (Ho, page 4, paragraph 35, noted that the acknowledgement frame has a value in indicating if the data frame was received correctly).

With respect to **claim 6,** Ho teaches the method in accordance with claim 1, wherein the event includes the successful processing of the request message by an application associated with the receiver system (Ho, page 4, paragraph 37, noted that upon successful processing and buffering the data frames at the receiving station, it sends back a value to the transmitting station indicating the available storage space for the future data frames).

With respect to **claim 7,** Ho teaches the method in accordance with claim 1, wherein the event includes the erroneous processing of the request message by an application associated with the receiver system (Ho, page 4, paragraph 35 noted that the acknowledgement frame includes a value in indicating whether the data frame was received correctly).

With respect to **claim 8 and 9,** Ho teaches the method in accordance with claim 1, further comprising generating and transmitting the acknowledgement message upon completion of the event to the sender system (Ho, page 4, paragraph 35 noted that the acknowledgement frame is sent from the receiving station to the transmitting station, which includes a value in indicating whether the data frame was received correctly).

With respect to **claim 10,** Ho teaches the method in accordance with claim 1, further comprising:

generating a hoplist that includes a list of network components through which the request message is transmitted (Ho, fig. 7 and page 5, paragraph 41, noted the TA and RA network components); and

transmitting an acknowledgement message related to each request for acknowledgement through network components corresponding to the hoplist (Ho, fig. 7 and page 5, paragraph 41, noted that the acknowledgement message is transmitted from receiving station at the Receiving Address (RA) to the sender station at the Transmitting Address (TA)).

With respect to **claim 11,** Ho teaches that each of the data frame corresponds to one or more requests for acknowledgement (Ho, page 1, paragraph 9), and receiving an

acknowledgement message related to event associated with each child message (Ho, page 1, paragraph 9). However, Ho does not explicitly teach a method of splitting, at one or more network components between the sender system and the receiver system, a request message that is transmitted to one or more receiver systems into two or child messages.

In the same field of endeavor, Wilhelmsson teaches a method of splitting, at one or more network components between the sender system and the receiver system, a request message that is transmitted to one or more receiver systems into two or child messages (Wilhelmsson, col. 7, lines 63-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of dividing the request message into number of data frames and transmitting them from a sender to a receiver system as taught by Wilhelmsson in Ho's invention in order to minimize the load on the transmission channels.

With respect to **claim 12,** Ho teaches a computer-implemented communication method for acknowledging one or more events related to an asynchronous request message sent from a sender system to a receiver system (Ho, fig. 5), the method comprising:

receiving data frames from the sender system (Ho, page 4, paragraph 33, noted that the transmitting station transmits data frames to the receiving station);

determining, based on the data frames, whether an acknowledgement to an event associated with the data frame is requested (Ho, page 4, paragraph 35, noted

that the receiving station sends an acknowledgment frame back to the sender station, wherein the acknowledgement frame includes a value in indicating whether the data frame was received correctly); and

if an acknowledgement to the event associated with the asynchronous request message is requested, transmitting an asynchronous acknowledgement message to the sender system upon occurrence of the event (Ho, page 4, paragraph 35, noted that the receiving station sends an acknowledgment frame back to the sender station, wherein the acknowledgement frame includes a value in indicating whether the data frame was received correctly), wherein the asynchronous acknowledgement message includes a result of the event and a reference to the data frame (Ho, page 4, paragraph 34, noted that the result and the reference value is indicated by the bitmap value).

However, Ho does not explicitly teach dividing an asynchronous request message into number of data frames and transmit them from a sender to a receiver system, and the asynchronous request message for enterprise application-level processing of the asynchronous request message at the receiver system.

In the same field of endeavor, Wilhelmsson teaches dividing an asynchronous request message into number of data frames and transmit them from a sender to a receiver system (Wilhelmsson, col. 7, lines 63-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of dividing the asynchronous request message into number of data frames and transmitting them from a sender to a receiver

system as taught by Wilhelmsson in Ho's invention in order to minimize the load on the transmission channels.

However, the combined method of Ho and Wilhelmsson does not explicitly disclose that the asynchronous request message for enterprise application-level processing of the asynchronous request message at the receiver system.

In the same field of endeavor, Wookey teaches a method of generating and sending a request message in a format in accordance with extensible markup language format (Wookey: fig. 19-20, page 17, paragraphs 208 & 216, noted that the sender (remote services proxy) makes a XML request message to the receiver system (Applications MLM)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of generating and sending a XML request message from the sender to the receiver system as taught by Wookey in the modified combined method of Ho's and Wilhelmsson's method. The motivation to combine the Wookey's method is that because XML request message format is International standard and platform independent, thus it can be moved freely between all hardware and OS platforms. As the consequence of combining the Wookey's invention with the combined method of Ho's and Wilhelmsson's method, that the XML request message is generated and processed from the Application layer, which is higher than the OSI model layer 3, thus the XML request message data needs to be processed from the Application layer down to the Physical Layer so that the actual data communication between the sender and receiver systems can be taken place in the

Physical Layer as disclosed in the combined method of Ho's and Wilhelmsson's invention. This process of data flow can be evidenced by the "Data Flow in the OSI Model" disclosed by MicrosoftTechNet. Therefore, the Physical layer communication in the combined method of Ho's and Wilhelmsson's invention can be easily combined with any higher layer data processing (i.e Wookey).

With respect to **claim 13,** Ho teaches the method in accordance with claim 12, wherein the event corresponds to one or more events selected from the event group that consists of:

the receipt of the asynchronous request message by the receiver system;

a system error during transport of the request message to the receiver system (Ho, page 4, paragraph 35, noted that the acknowledgement frame has a value in indicating if the data frame was received correctly);

the successful processing of the request message; and/or

the erroneous processing of the request message

With respect to **claim 14,** Ho teaches the method in accordance with claim 12, wherein the asynchronous acknowledgement message is generated by the receiver system (Ho, page 4, paragraph 35), and further comprising receiving the asynchronous acknowledgement message from the receiver system (Ho, page 4, paragraph 35, noted that the acknowledgement frame is sent from receiving station to the sender system, thus the sender system receives the acknowledgement frame).

With respect to **claim 23,** Ho teaches the method in accordance with claim 1, wherein the asynchronous request message comprises a plurality of requests

comprising a first request for acknowledgement of a state of processing of the asynchronous request message at a software application of the receiver system and each of the requests is to result in a separate acknowledgment message (Ho, page 4, paragraph 35 noted that the acknowledgement frame is sent from the receiving station to the transmitting station, which includes a value in indicating whether the data frame was received correctly).

With respect to **claim 24,** Ho teaches the method in accordance with claim 23, wherein the first request is a request for acknowledgement of whether the software application failed to process the message (Ho, page 4, paragraph 35 noted that the acknowledgement frame includes a value in indicating whether the data frame was received correctly).

With respect to **claim 25,** the combined method of Ho and Wilhelmsson teaches all the claimed limitations, except that they do not explicitly disclose that the sender and receiver systems are web-based applications.

In the same of endeavor, Wookey teaches a method of generating and sending a XML request message from the sender to the receiver system, wherein the sender and receiver systems are web-based applications (Wookey: fig. 19 & 20, paragraphs 208 & 216). The same motivation that was utilized in the rejection of claim 1, applies equally as well to claim 25.

14. Claims 2, 3, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ho et al. (publication no.: US 2003/0135640 A1)** in view of

Wilhelmsson (Patent no.: US 5,654,969) and **Wookey et al (PGPUB: US 2003/0177259 A1)** and further in view of **Frymier (Patent no.: US 5,604,487).**

With respect to **claims 2 and 3,** the combined method of Ho, Wilhelmsson and Wookey teaches all the claimed limitations except that they do not explicitly teach a method of setting a flag in a header of the asynchronous request message.

In the same field of endeavor, Frymier teaches a method of setting a flag in a header of the asynchronous request message (Frymier, col. 31, lines 42-49, noted the 'more data' flag).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of setting a 'more data' flag in the header of the asynchronous request message as taught by Frymier in the combined method of Ho, Wilhelmsson and Wookey invention in order to notifying the receiver system that there are more data packets follow.

With respect to **claim 17,** the combined method of Ho, Wilhelmsson and Wookey teaches all the claimed limitations except that they do not explicitly teach a method of reading a flag in a header of the asynchronous request message.

In the same field of endeavor, Frymier teaches a method of reading a flag in a header of the asynchronous request message (Frymier, col. 31, lines 42-49, noted the 'more data' flag).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of reading a 'more data' flag in the header of the asynchronous request message as taught by Frymier in the combined

method of Ho, Wilhelmsson and Wookey invention in order to notifying the receiver system that there are more data packets follow.

With respect to **claim 18,** the combined method of Ho, Wilhelmsson and Wookey teaches all the claimed limitations except that they do not explicitly teach that the flag is set by the sender system.

In the same field of endeavor, Frymier discloses that the flag is set by the sender system (Frymier, col. 31, lines 42-56, noted that the flag is set in the data header and transmitted to the receiving side).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of setting a 'more data' flag in the header of the asynchronous request message as taught by Frymier in the combined method of Ho, Wilhelmsson and Wookey invention in order to notifying the receiver system that there are more data packets follow.

15. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ho et al. (publication no.: US 2003/0135640 A1)** in view of **Wilhelmsson (Patent no.: US 5,654,969)** and **Wookey et al (PGPUB: US 2003/0177259 A1)** and further in view of **Bunton (patent no.: US 7,010,607 B1).**

With respect to **claim 15 and 16,** the combined method of Ho, Wilhelmsson and Wookey teaches all the claimed limitations except that they do not explicitly teach a method of matching and comparing the reference of the asynchronous

acknowledgement message to a message ID of a copy of the asynchronous request message.

In the same field of endeavor, Bunton teaches a method of matching and comparing the reference of the asynchronous acknowledgement message to a message ID of a copy of the asynchronous request message (Bunton, col. 75 lines 62 to col. 76 lines 15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of comparing the sequence number of the frames as taught by Bunton in the combined method of Ho, Wilhelmsson and Wookey invention in order to ensure that each data frames are acknowledged by the receiver system.

16. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ruutu et al. (patent no.: US 7,032,111 B1)** in view of **Bunce et al. (publication no.: US 2003/0163589 A1)** and **Wookey et al (PGPUB: US 2003/0177259 A1)** and as evidenced by **Microsoft TechNet (Windows 2000 Resource kit).**

With respect to **claim 19,** Ruutu teaches a system for asynchronous communication between a sender system and a receiver system (Ruutu, fig. 7), comprising:

a forward for transmitting asynchronous request messages from the sender system to the receiver system (Ruutu, fig. 7, col. 8, lines 40-43, noted that the packet is

sent from the source host to the network element and forwarded to the destination host); and

a backward for transmitting asynchronous acknowledgement messages from the receiver system to the sender system (Ruutu, fig. 7, col. 8, lines 43-49, noted that the destination host encrypts the ACK message in the header packet and sends to the network element, wherefore the network element forwards the packet to the source host), wherein each acknowledgement message includes a reference to a request message (Ruutu, col. 2, lines 40-41, noted the ACK flag and the acknowledgement number) and a result of an event associated with the request message (Ruutu, col. 8, lines 40-67, noted that the pack sent by the source host is received by the destination host and an ACK message is sent back to the source host).

However, Ruutu does not explicitly teach pipeline processing the packets in the network element, and the asynchronous request message for enterprise application-level processing of the asynchronous request message at the receiver system.

In the same field of endeavor, Bunce teaches pipeline processing the packets in the network element (Bunce, page 1 paragraph 7 and page 2, paragraph 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method pipelined packet processing at the network element as taught by Bunce in the Ruutu's invention in order to provide a dynamic allocation of processors in processing tasks to maximize efficient processing resource allocation and reduces pipeline imbalance, and ensuring a flexible solution and maximal throughput in packet processing (Bunce, page 1, paragraph 7).

However, the combined method of Ruutu and Bunce does not explicitly disclose that the asynchronous request message for enterprise application-level processing of the asynchronous request message at the receiver system.

In the same field of endeavor, Wookey teaches a method of generating and sending a request message in a format in accordance with extensible markup language format (Wookey: fig. 19-20, page 17, paragraphs 208 & 216, noted that the sender (remote services proxy) makes a XML request message to the receiver system (Applications MLM)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of generating and sending a XML request message from the sender to the receiver system as taught by Wookey in the modified combined method of Ho's and Wilhelmsson's method. The motivation to combine the Wookey's method is that because XML request message format is International standard and platform independent, thus it can be moved freely between all hardware and OS platforms. As the consequence of combining the Wookey's invention with the combined method of Ho's and Wilhelmsson's method, that the XML request message is generated and processed from the Application layer, which is higher than the OSI model layer 3, thus the XML request message data needs to be processed from the Application layer down to the Physical Layer so that the actual data communication between the sender and receiver systems can be taken place in the Physical Layer as disclosed in the combined method of Ho's and Wilhelmsson's invention. This process of data flow can be evidenced by the "Data Flow in the OSI

Model" disclosed by MicrosoftTechNet. Therefore, the Physical layer communication in the combined method of Ho's and Wilhelmsson's invention can be easily combined with any higher layer data processing (i.e Wookey).

With respect to **claim 20,** Ruutu teaches the system in accordance with claim 19, further comprising an enterprise application integrator hosted on a server (Ruutu, fig. 7, network element 20), and wherein the forward pipeline includes a first HTTP connection from the sender system to the server and a second HTTP connection from the server to the receiver system (Ruutu, col. 8, lines 40-67, noted that the network element receives the packet from the source host and forwards the packet to the destination host, thus it is an inherent feature for the network element to have a connection from the source host to the network element and another connection from network element to the destination host).

With respect to **claim 21**, Ruutu teaches the system in accordance with claim 19, wherein the backward pipeline includes a first HTTP connection from the receiver system to the server and a second HTTP connection from the server to the sender system (Ruutu, col. 8, lines 40-67, noted that the network element receives TCP packet with ACK message encrypted from the destination host and forwards the packet to the source host, thus it is an inherent feature for the network element to have a connection from the destination host to the network element and another connection from network element to the source host).

With respect to **claim 22,** Ruutu teaches all the claimed limitations, except that he does not explicitly teach a method of storing a copy of a request message and an acknowledgement message in a database.

In the same field of endeavor, Bunce teaches storing a copy of a request message and an acknowledgement message in a database (Bunce, page 2, paragraph 21, noted that the multi-processor server buffers the inbound and outbound packets).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of buffering the inbound and outbound packets as taught by Bunce in Ruutu's invention in storing the request and acknowledgement messages in order to have a copy of the message ready after the network element observer for the network congestion and ready to forwards the message.

17. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ho et al. (publication no.: US 2003/0135640 A1)** in view of **Wilhelmsson (Patent no.: US 5,654,969)** and **Wookey et al (PGPUB: US 2003/0177259 A1)** and further in view of **Bunce et al. (publication no.: US 2003/0163589 A1).**

With respect to **claim 26,** Ho teaches the method in accordance with claim 1, wherein the transmitting of the asynchronous request message is initiated by an outbound proxy call to an exchange engine to transmit the asynchronous request message to an exchange infrastructure server (Ho: fig. 1 & 5, page 4, paragraph 33), the asynchronous request message and the exchange infrastructure store duplicates of the asynchronous request message for reexecution in case of error, and an application

of the sender system that causes the call the outbound proxy continues processing information other than the asynchronous request message without an acknowledgment from the receiver system or status of the call (Ho: page 4, paragraphs 34-35).

However, the combined method of Ho, Wilhelmsson and Wookey does not explicitly teach a method of storing duplicates of an asynchronous request message for re-execution in case of error.

In the same field of endeavor, Bunce teaches a method of storing duplicates of an asynchronous request message for re-execution in case of error (Bunce, page 2, paragraph 21, noted that the multi-processor server buffers the inbound and outbound packets).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of buffering the inbound and outbound packets as taught by Bunce in the combined method of Ho, Wilhelmsson and Wookey invention in storing the request and acknowledgement messages in order to have a copy of the message ready after the network element observer for the network congestion and ready to forwards the message.

Conclusion

18. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./
/Lin Liu/

Examiner, Art Unit 2145

/Jason D Cardone/
Supervisory Patent Examiner,
Art Unit 2145